

ennos sunlight pump datasheet

General Information of the sunlight pump

- ✓ Solar water pump with integrated controller – for easy plug and pump up to 22 m³ water per day
- ✓ Maximum Power Point Tracking and variable speed operation – for maximum water output at any time of the day
- ✓ 0.5HP (373W) Brushless DC Motor - for maintenance free operation and high efficiency over wide flow and pressure range
- ✓ Progressive Cavity Displacement pump mechanism – for constant flow regardless of pressure
- ✓ Online configuration tool – for sizing the correct panel configuration from 100 to 500 Watt according to customer needs
- ✓ LED Display – for fast information about operation, trouble shooting and actual flow rate
- ✓ Bluetooth Interface – for detailed actual and statistical data through android phone using the ennos sunlight pump app
- ✓ Running dry protection and tank overflow sensor for an automated and simple operation of the pump system
- ✓ Operation with Battery – for constant operation without sunshine
- ✓ Overflow switch interface – for a sustainable use of water
- ✓ Pumping capacity at least up to 40m vertically and up to 2000m horizontally



Technical specifications Model: JSPBL0.3/HF2.4-5

Total dynamic head (TDH)	40 m
Suction capacity at sea level (vertical meters) ¹	7 m
Maximum water flow rate	45 l/min
Range of maximum power point voltage (V_{MPP}) ^{2,3}	15 - 52 V
Range of open circuit voltage (V_{OC}) ⁴	17 - 65 V
Maximum Input current @ 25°C	9.5 A
Maximum Input power	500 W
Temperature operation of pump	0 - +50 °C
Temperature storage ⁵	-30 - +55 °C
Pump dimensions	L 595 x H 290 x W 240 mm
Pump weight	14 kg
Inlet	Foot valve with strainer
Type of enclosure	IP65

1 Suction capacity at sea level. Subtract 1m for every 1000m altitude.

2 PV modules at standard test condition: AM = 1.5, E = 1,000 W/m², cell temperature: 25 °C

3 CAUTION: If the connected solar module supplies an open circuit voltage of more than 65 V, the controller will be destroyed. When selecting the solar module, it is important to bear in mind that the open circuit voltage should never exceed 65 V over the entire working temperature range. When using solar modules with a maximum open circuit voltage of between 60 and 65 V (over the entire temperature range), all installation steps must be carried in accordance with protection class II.

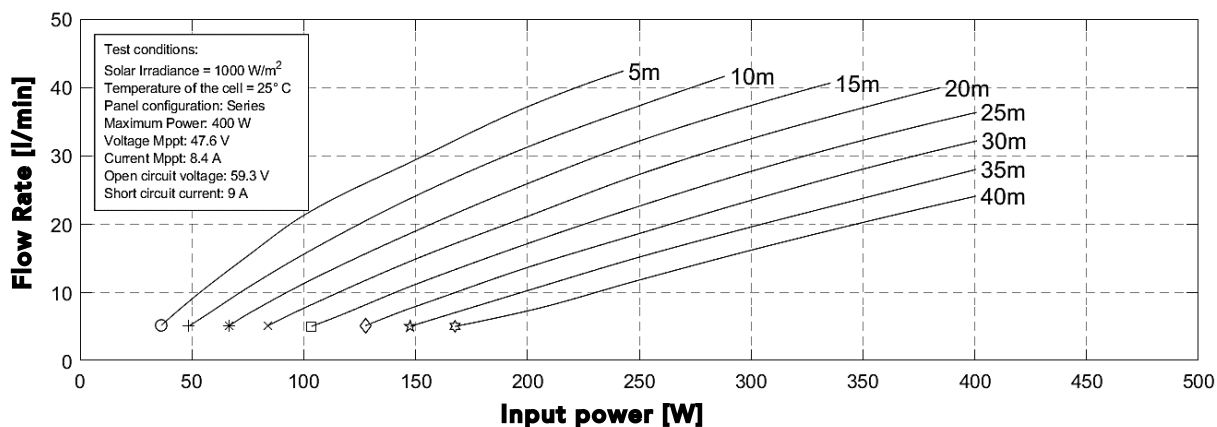
4 PV modules at standard test condition: AM = 1.5, E = 1,000 W/m², cell temperature: 0 °C

5 Pump must be empty if stored at temperatures below 0°C

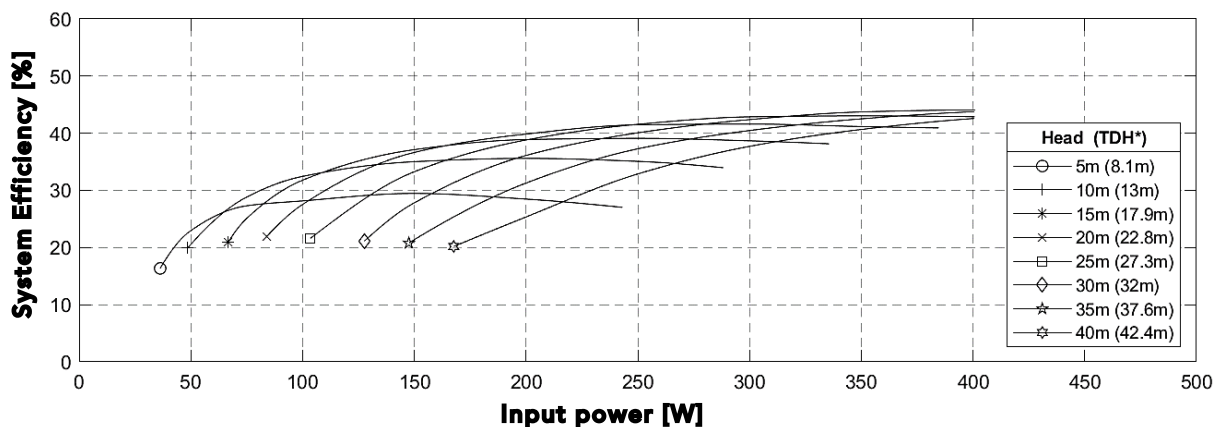


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sunlight pump performance chart



sunlight pump efficiency chart



* TDH: Total dynamic head includes pressure loss

Curves in Graphic are mean values. Input power is measured at the pump, not the solar panels

Battery mode* with Valve Regulated Lead Acid (VRLA) battery

Nominal voltage

24 / 36 / 48 V

* I: The use of the sunlight pump in battery mode requires an external charge controller to avoid deep discharging of the batteries by the pump and to control the charging by the solar panels.

II: Using the sunlight pump with 24V batteries restricts the max. power to ≈ 240W. If you want the sunlight pump to perform at full capacity, use a 36V or 48V battery system.

III: The sunlight pump can be used with various battery types (LiFePo, AGM), if the nominal voltage is 24V, 36V or 48V

Further Information

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sunlight pump powered by battery

Battery mode* with Valve Regulated Lead Acid (VRLA) battery

Nominal voltage

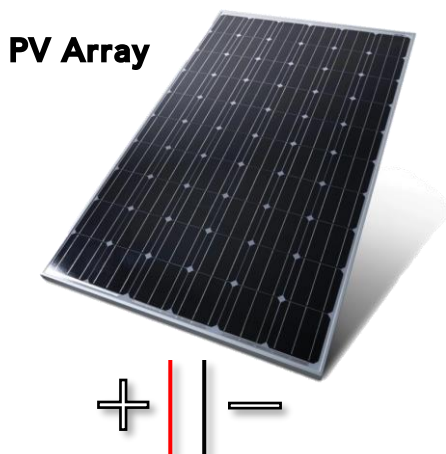
24 / 36 / 48 V

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II: Using the sunlight pump with 24V batteries restricts the max. power to $\approx 240W$. If you want the sunlight pump to perform at full capacity, use a 36V or 48V battery system.

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sunlight pump: example of battery mode in use with solar panels



PV Array

This is an example showing a 24V setup. The charge controller needs to fit battery and solar panel specifications. For other setup possibilities of the sunlight pump with batteries, consult the above table.

Charge Controller

1st Connection: Battery



Battery setup

2nd Connection: PV



PV array

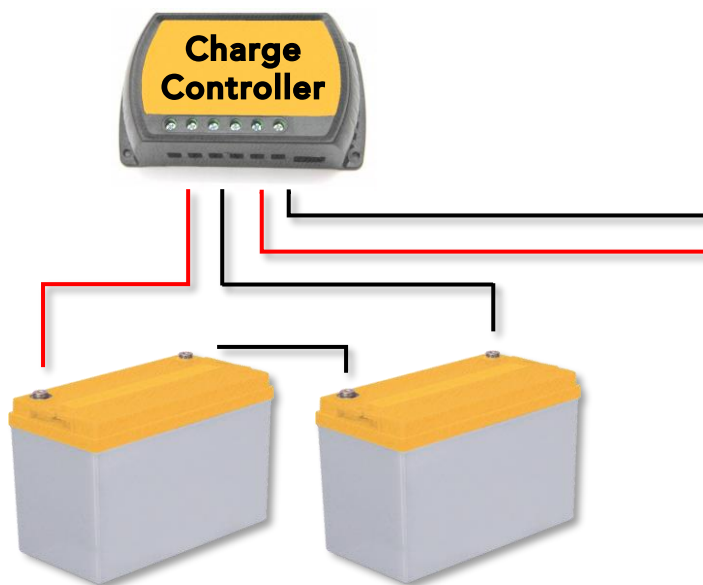
3rd Connection: Load



Sunlight pump

sunlight pump

Mode: Battery



2x 12V VRLA Battery

Connected in series

